

Work Order ID 58366

May 4, 2010 1:17:22 PM



Page 1

Item ID: D407-667-105

Accept



Setup Start



Revision ID:

Item Name: Crosstube Fwd

Stop



Start Date: 04/05/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 20/05/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 10-5-04

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---------------------------------------------------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| D407-667-145 | Rev C | | | | | | | | |
| 100 | | 0.00 | | | | | | | |
| | DOCUMENT CONTROL | | | | | | | | |
| DC | Memo | 0.00 | | | | | | | |
| Document Control | Photocopy bluefile and create labels as per PPP D407-667-105 CHG003 | | | | | | | | |
| 110 | | 0.00 | | | | | | | |
| | Packaging | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |
| 120 | | 0.00 | | | | | | | |
| | BENDING MACHINE - CROSSTUBES | | | | | | | | |
| CNC Bend 2 | Memo | 0.00 | | | | | | | |
| CNC Alpha 160 Bender | Bend tube as per Dwg D407-667-145 using CNC bender program 407-fw | | | | | | | | |

5 10-5/31 *[Signature]* BG 10/05/31

(1X) *[Signature]* MB 10-05-18

(1X) *[Signature]* MB 10-05-18

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC15- Crosstube Dimensional Check

0.00

8 10/05/10



QC

Memo

0.00

Quality Control

40

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1- scribe batch # inside of cuff

2-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill all (3) top holes.

3-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145 Check dimensions between holes on all four sides.

4-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

5-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg 407-667-145. Drill only the top (2) holes.

6-Drill & ream the top (2) holes to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145

7-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-145. Note: Fwd side has 3x top holes.

8-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D407-667-145.

9-C'sink holes as per Dwg D407-667-145. Allow rivet to sit below surface to compensate for paint.

10 -Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145

NIB
10-5-19

-AWM

10-5-19

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|----------------------------------------------------|-----------------------------------------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|------------------------------|
| 150 HandFXtube Hand Finishing Crosstubes | Crosstubes Chemical Conversion Memo | 0.00 0.00 | | | | | | | <i>AWM</i> <i>10-5-19</i> |
| 160 QC Quality Control | QC3- Inspect Part Finish Memo | 0.00 0.00 | | | | | | | <i>Swlos119</i> |
| 170 QC Quality Control | QC5- Inspect part completeness to step on W/O Memo | 0.00 0.00 | | | | | | | <i>Swlos119</i> <i>FD</i> |

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

Outsource process - NDT per QSI038 4.1

0.00



Outsource2

Memo

0.00

Outsource process - NDT

OUTSIDE SERVICE -CROSSTUBES
Liquid Penetrant Inspection as per QSI 038 Or
Issue P/O: 1847 LPI as per ASTM 1417
Level 2 Attach copy of NDT results to work orderCL 10/5/20 ①

190

Packaging

0.00



Packaging

Memo

0.00

Packaging

Inspect for transit damage
Ensure copy of NDT results attached to work order.PC 14/5/20 ①

200

QC5
~~QC6~~ Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Inspect for damage & ensure results are as per Dwg D206-667-145

ml 10 05 25 ①

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 7:30

Fininsh Time: 8:30

PAINT:

Start Time: 1:00

Finish Time: 2:00

ml 10 05 26 ①

220

0.00



QC14- Inspect Spray Paint

QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

BT 10-05-26

| W/O: | | WORK ORDER CHANGES | | | | | |
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Item ID: D407-667-105

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Item Name: Crosstube Fwd

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Cust Item ID:

Required Date: 20/05/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
| 230 Crosstubes | Crosstubes | 0.00 | | | | <u>ml</u> | <u>10</u> | <u>05</u> | <u>27</u> ① |
| Crosstubes | Memo 1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (3) top holes should be facing up. A/R Magnobond 6398: <u>114021 exp: 01/2011</u> 2-Torque clamps to 80-100 in lb <u>ml 10 05 28</u> 3-Install nut plates as per Dwg D407-667-145. Touch-up rivet heads with Imron paint. <u>ml 10 05 28</u> | 0.00 | | | | | | | |
| 240 QC | QC5- Inspect part completeness to step on W/O | 0.00 | | | | <u>10</u> | | | |
| Quality Control | Memo 8 10/05/28 | 0.00 | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10-5-31

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8/10/5/31

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D407-667-105

Location:

PPP Rev:

10-5-31

| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
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Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/06/01

10-4-01

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Work Order ID: 58366

Parent Item: D407-667-105

Parent Item Name: Crosstube Fwd

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM
 IPP Rev:G 08-05-16 chg QC6 to QC15 DD verified by:EC
 IPP Rev:H 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec
 IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC

Start Date: 04/05/2010

Required Date: 20/05/2010

Start Qty: 1.00

Required Qty: 1.00

D407-667-105TRN

Manufactured No

110

Each

2.0000

1



Crosstube Turning Detail

MB 10-05-17

Location

Loc Qty

Loc Code

LG

2

56973

1

56974

1

D2856-400-694

Manufactured No

230

Each

0.0000

2



Abrasion Strip → N/A ml/ml

D2873-043

Manufactured No

230

Each

58.0000

2



Nut Plate Assembly

Location

Loc Qty

Loc Code

LG

58

53966

20

56466

18

57337

20

D2873-045

Manufactured No

230

Each

54.0000

2



Nut Plate Assembly

Location

Loc Qty

Loc Code

LG

54

53967

15

53968

20

57336

19

ml 10.05.28

ml 10.05.28

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 IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC

Start Qty: 1.00

Required Qty: 1.00

D2891-1 Manufactured No 230 Each 69.0000 2



2.25 Support

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG | 69 | |
| 43880 | 7 | |
| 46159 | 20 | |
| 50952 | 18 | |
| 53347 | 4 | |
| 53773 | 20 | |

ml 10-05-27

MS20601-AD4W10 Purchased No 230 Each 170.0000 14



RIVET

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG051 | 100 | |
| 114245 | 100 | |
| ST322 | 70 | |
| 113220 | 70 | |

ml 10-05-28

MS21920-20 Purchased No 230 Each 43.0000 4



Clamp (per MIL-DTL-8783C)

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG | 43 | |
| 112307 | 2 | |
| 112624 | 38 | |
| 112793 | 3 | |

ml 10-05-27

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Parent Item Name: Crosstube Fwd

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:G 08-05-16 chg QC6 to QC15 DD verified by:EC
IPP Rev:H 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec
IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC

Start Date: 04/05/2010

Required Date: 20/05/2010

Start Qty: 1.00

Required Qty: 1.00

AN5-10A

Purchased

No

250

Each

139.0000



Bolt



10

10-5-318

Location

Loc Qty

Loc Code

ST337

139

114199

100

114227

39

10

AN5-30A

Purchased

No

250

Each

70.0000



BOLT



4

10-5-31

Location

Loc Qty

Loc Code

ST339

70

112933

45

114437

25

4

AN5-32A

Purchased

No

250

Each

212.0000



Bolt



4

10-5-31

Location

Loc Qty

Loc Code

ST340

212

113121

62

114056

100

114405

50

4

AN960JD516

Purchased

No

250

Each

0.0000



Washer



18

M 113706 10-5-318

May 4, 2010 1:17:26 PM

Shop Packet Print

Page 3

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

May 4, 2010 1:17:26 PM

Page 4

Work Order ID: 58366



Parent Item: D407-667-105



Parent Item Name: Crosstube Fwd

Start Date: 04/05/2010

Required Date: 20/05/2010

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM
 IPP Rev:G 08-05-16 chg QC6 to QC15 DD verified by:EC
 IPP Rev:H 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec
 IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

250

Each

697.0000



Nut



10-5-31

Location

Loc Qty

Loc Code

ST300

697

113523

26

113537

3

114108

168

114437

100

114449

400

Rubber Cushion: B# 44667 ml 10 05.27

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

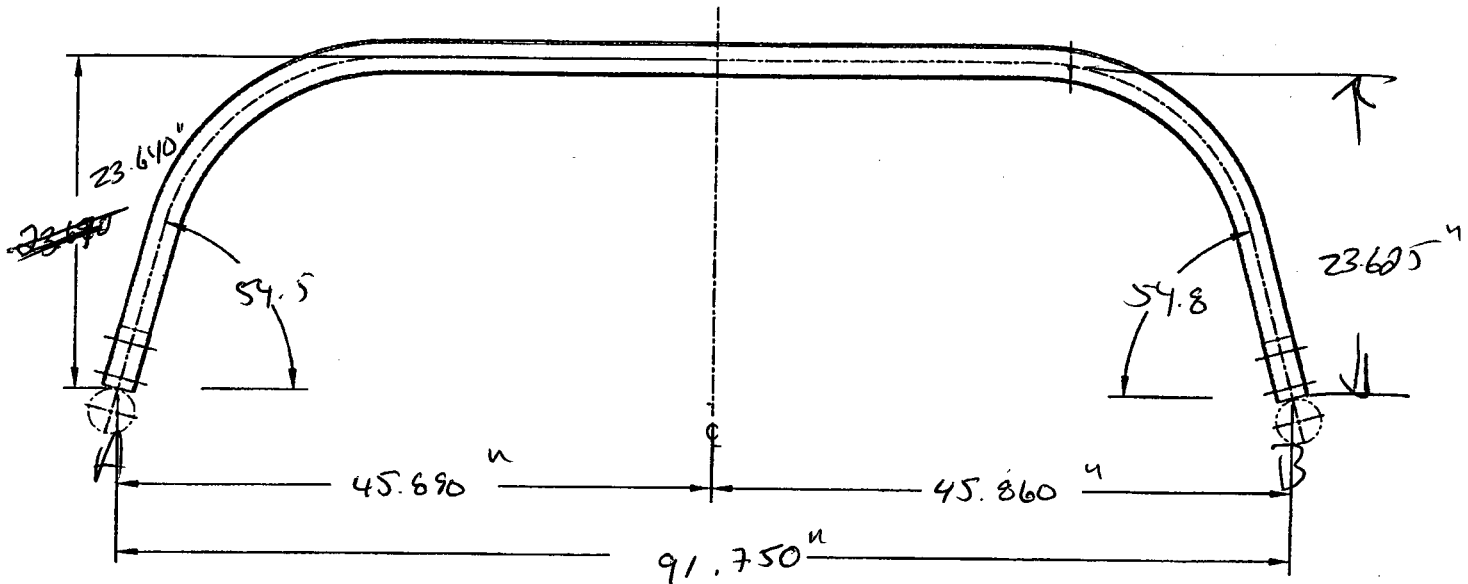
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

| | | | |
|---------------------------------------|--|--------------|--------------|
| DART AEROSPACE LTD | | Work Order: | 583666 |
| Description: Crosstube High Fwd (407) | | Part Number: | D407-667-105 |
| Inspection Dwg: D407-667-145 Rev: C | | Page 1 of 1 | |

| Required Dimension | Min | Max |
|--------------------|-------|-------|
| Height | 23.41 | 23.67 |
| 1/2 Span | 45.81 | 46.07 |
| Angle | 54 | 56 |
| Total Span | 91.63 | 92.13 |



| Comments |
|----------|
| |
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| |
| |

| | |
|-----------------|----------|
| QC15 Inspection | 8 |
| Date | 10/05/18 |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|----------------------------------|------------|----------|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 09.11.12 | Dimensions updated per Dwg Rev C | KJ | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

| Item | Qty -145 | Part Number | Description |
|------|-------------|-------------------|----------------------------------------------------------------------------------------------------------------|
| 1 | X | D407-667-145 | CROSSTUBE ASSEMBLY (407 HIGH FWD) |
| 2 | 1 | D6010-115 | CROSSTUBE |
| 3 | 2 | D2873-043 | NUT PLATE |
| 4 | 2 | D2873-045 | NUT PLATE |
| 5 | 2 | D2891-1 | SUPPORT |
| 6 | 4 | D3595-063-395 | RUBBER CUSHION |
| 7 | 4 | MS21920-20 | CLAMP (OR MS21920-21) |
| 8 | 14 | MS20601AD4W10 | RIVET (OR NAS9302B-4-10) |
| 9 | A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE) |

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6010-115
FINISHED LENGTH = 113.20±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-145" AND BATCH NUMBER ON
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 17.8 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY.
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE
THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS
ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 58396

BS10-5-04

RELEASED
08/11/06

| | | | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| C | REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-684 (ZN D6-2 & AS-2); REMOVED REF. 7 ADD TOLERANCES (ZN C6-3, C4-3, D2-3); RELOCATED FLAG #8 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4. | RF | 08.11.06 |
| B | ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES | PH | 05.07.26 |
| A | NEW ISSUE | CP | 02.05.08 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | <i>JP</i> | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | <i>JP</i> | DRAWING NO. | REV. C |
| MFG. APPR. | <i>JP</i> | D407-667-145 | SHEET 1 OF 4 |
| APPROVED | <i>JP</i> | TITLE | SCALE |
| DE APPR. | <i>JP</i> | CROSSTUBE ASS'Y (407 HIGH FWD) | NTS |
| DATE | 08.11.06 | COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

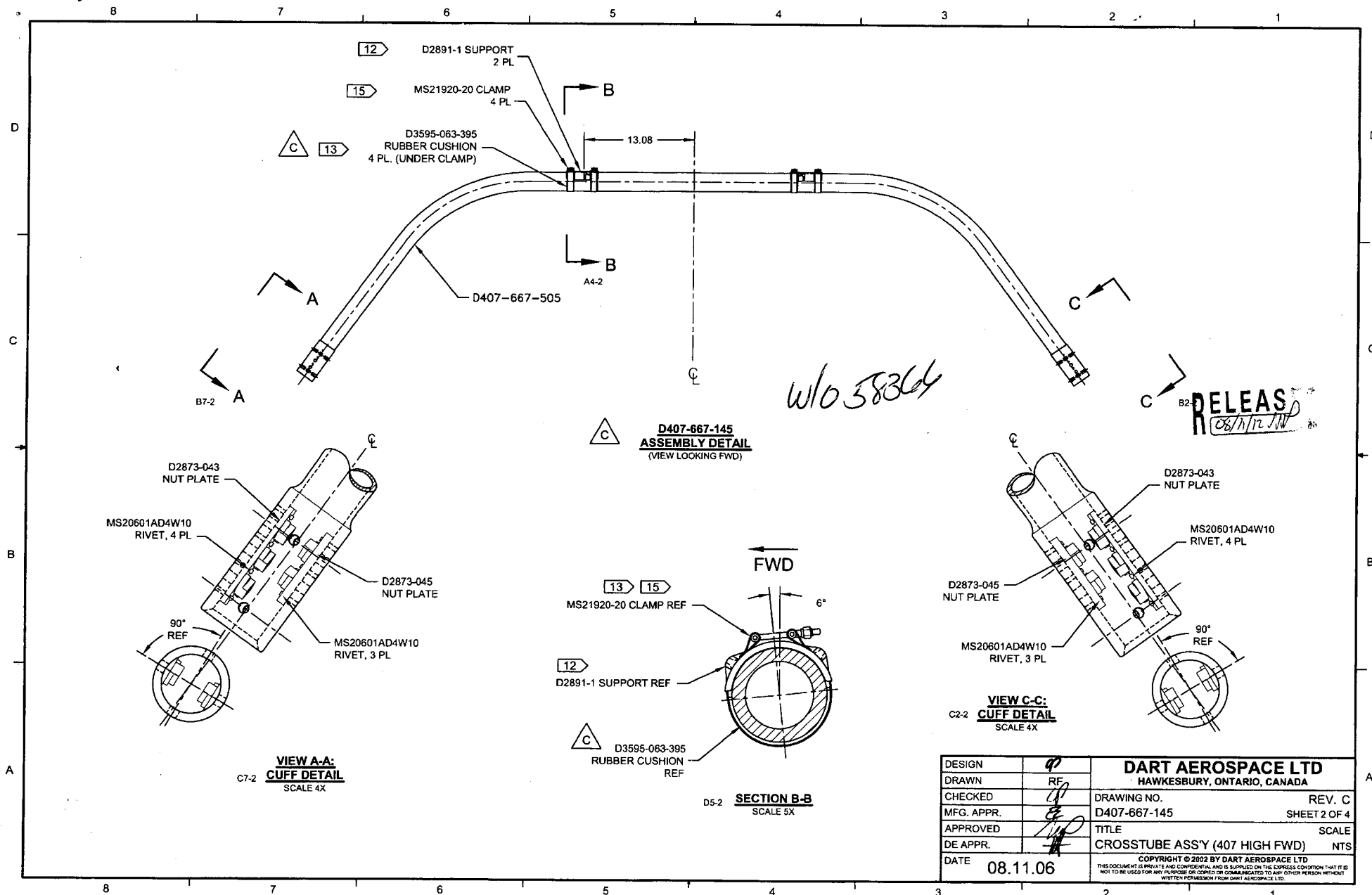
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



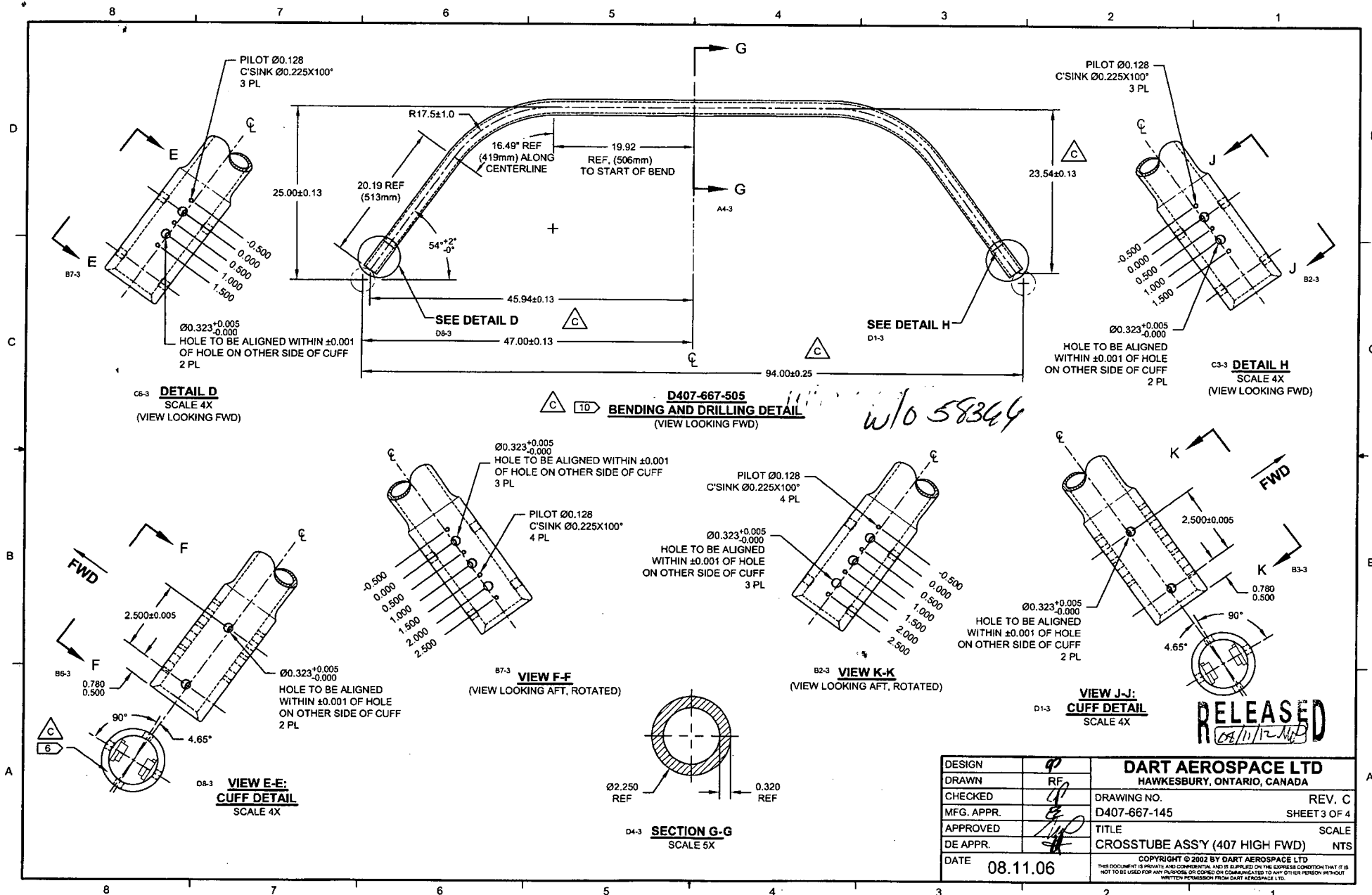
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NOTE: Date & initial all entries



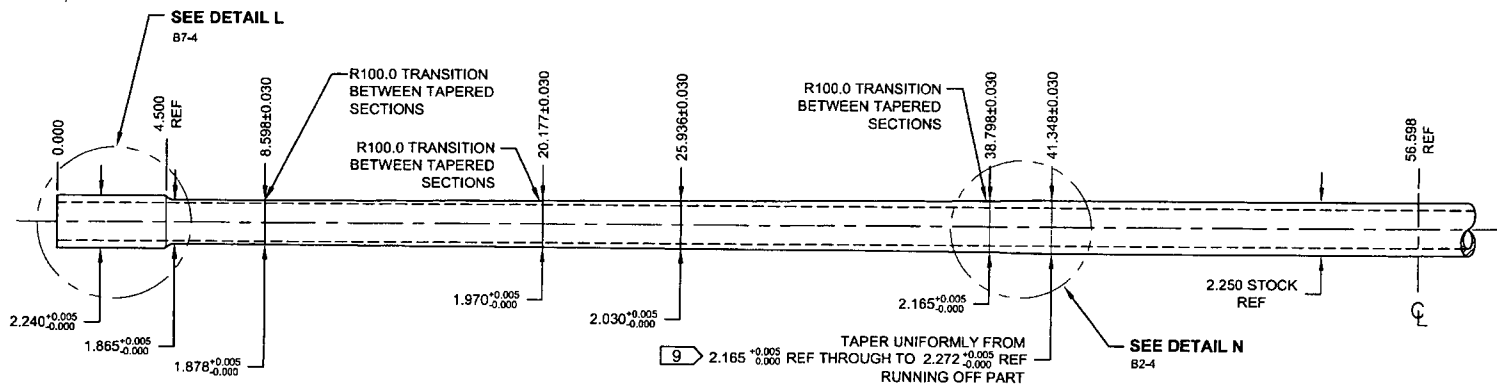
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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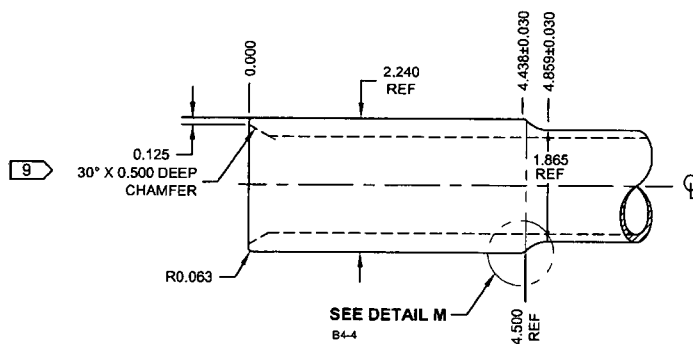
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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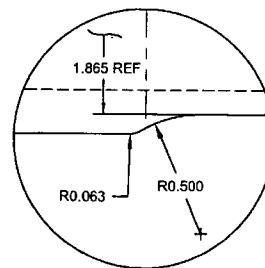
NOTE: Date & initial all entries



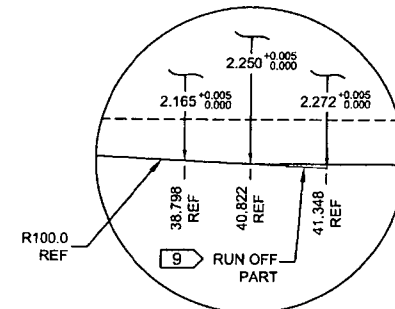
TURNING DETAIL



**DETAIL L:
CROSSTUBE CUFF**
NOT TO SCALE



**DETAIL M:
CUFF TRANSITION**
NOT TO SCALE



**DETAIL N:
TAPER RUN-OFF**
NOT TO SCALE

RELEASED
08/11/06

| | | | |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN | 9 | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | RF | DRAWING NO. | REV. C |
| MFG. APPR. | RF | D407-667-145 | SHEET 4 OF 4 |
| APPROVED | RF | TITLE | SCALE |
| DE APPR. | RF | CROSSTUBE ASS'Y (407 HIGH FWD) | NTS |
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NOTE: Date & initial all entries

5.0 PARTS LIST

| Item | Qty -011 | Qty -013 | Qty -015 | Qty -101 | Qty -201 | Qty -103 | Qty -203 | Qty -105 | Qty -205 | Part Number | Description |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|------------------------------------------------------|
| | X | | | | | | | | | D206-667-011 | SPACER BLOCK KIT |
| | | X | | | | | | | | D206-667-013 | NUT PLATE KIT (-101/-103/-105/-203/-205) |
| | | | X | | | | | | | D206-667-015 | NUT PLATE KIT (-201) |
| | | | | X | | | | | | D206-667-101 | CROSSTUBE INSTALLATION, 206A/B HIGH FWD |
| | | | | | X | | | | | D206-667-201 | CROSSTUBE INSTALLATION, 206A/B HIGH AFT |
| | | | | | | X | | | | D206-667-103 | CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD |
| | | | | | | | X | | | D206-667-203 | CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT |
| | | | | | | | | X | | D407-667-105 | CROSSTUBE INSTALLATION, 407 HIGH FWD |
| | | | | | | | | | X | D407-667-205 | CROSSTUBE INSTALLATION, 407 HIGH AFT |
| 1 | | | | 1 | | | | | | D206-667-141 | CROSSTUBE ASSEMBLY, 206A/B HIGH FWD |
| 2 | | | | | 1 | | | | | D206-667-241 | CROSSTUBE ASSEMBLY, 206A/B HIGH AFT |
| 3 | | | | | | 1 | | | | D206-667-143 | CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD |
| 4 | | | | | | | 1 | | | D206-667-243 | CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT |
| 5 | | | | | | | | 1 | | D407-667-145 | CROSSTUBE ASSEMBLY, 407 HIGH FWD |
| 6 | | | | | | | | | 1 | D407-667-245 | CROSSTUBE ASSEMBLY, 407 HIGH AFT |
| 10 | | | | *2 | *2 | *2 | | *2 | | D2891-1 | SUPPORT |
| 11 | | | | | | | *2 | | | D2892-1 | SUPPORT |
| 12 | | | | | | | | | *1 | D2894-1 | SUPPORT |
| 13 | | | | *2 | *2 | *2 | | *2 | | D2856-400-694 | ABRASION STRIP |
| 14 | | | | | | | *2 | | *2 | D2856-400-773 | ABRASION STRIP |
| 15 | | | | | | | | | *1 | D2856-600-851 | ABRASION STRIP |
| 16 | | | | *4 | *4 | *4 | | *4 | | MS21920-20 | CLAMP |
| 17 | | | | | | | *4 | | *4 | MS21920-22 | CLAMP |
| 18 | | | | | | | | | *2 | MS21920-24 | CLAMP |
| 19 | | | | 4 | 4 | 4 | | 4 | | AN5-32A | BOLT |
| 20 | | | | | | | 4 | | 4 | AN5-34A | BOLT |
| 21 | | | | 4 | 4 | 4 | 4 | 4 | 4 | MS21042L5 | NUT (OR MS21042-5) |
| 22 | | | | 8 | 8 | 8 | 8 | 8 | 8 | AN960JD516 | WASHER |
| 23 | | | | | | | | | *2 | D3190-1 | CHAFING SHIELD |
| 30 | 8 | | | | | | | | | AN4-6A | BOLT |
| 31 | 8 | | | | | | | | | AN4-7A | BOLT |
| 32 | 16 | | | | | | | | | AN960JD416 | WASHER |
| 33 | 2 | | | | | | | | | D3193-041 | SPACER BLOCK ASSEMBLY |
| 40 | | 2 | | *2 | | *2 | *2 | *2 | *2 | D2873-043 | NUT PLATE |
| 41 | | 2 | | *2 | | *2 | *2 | *2 | *2 | D2873-045 | NUT PLATE |
| 42 | | | 2 | | 2 | | | | | D2872-043 | NUT PLATE |
| 43 | | | 2 | | 2 | | | | | D2872-045 | NUT PLATE |
| 44 | | 10 | | 10 | | 10 | | | | AN5-7A | BOLT |
| 45 | | 10 | 10 | | 10 | | 10 | 10 | 10 | AN5-10A | BOLT |
| 46 | | 4 | 4 | 4 | 10 | 4 | | 4 | | AN5-30A | BOLT |
| 47 | | 4 | | | | | 4 | | 4 | AN5-32A | BOLT |
| 48 | | 18 | 18 | 10 | 12 | 10 | 10 | 10 | 10 | AN960JD516 | WASHER |
| 49 | | 4 | 4 | | 6 | | | | | MS21042L5 | NUT (OR MS21042-5) |

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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Revision: C

Date: 05.07.26

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P- 15324

PAGE 1 OF 1

CLIENT DAVE AEROSPACE DATE MAY 20-2010 TIME AM ☒ PM ☐
ATTENTION LINDA/CHANTEL ACUREN JOB NO. 188-10-0758
ADDRESS 1270 ABELVEEN ST. POWO No. 118471
HAWKES BURY AVE KGH 1K7 WORK LOCATION SHOP
ACCEPTANCE STD. ASTM 1417 REV./DATE 2007
PROJECT F.P.I. ON CROSS TUBES
ITEM(S) EXAMINED 4 Pcs

JOB DESCRIPTION PROCEDURE No. LT0002 REV./DATE TECHNIQUE No. LT-1417 2 REV./DATE
PART NO. MATERIAL ALUMINUM THICKNESS
SCOPE WET FLUORESCENT LIQUID PENETRANT INSPECTION,
CARRIED OUT 100% EXTERNAL

TEST DETAILS
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 16459 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
PENETRANT 2LG7 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER LABINO
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1098866 CAL DUE DATE Oct-19-
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY 2010

TEST SURFACE
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- ☐ METRIC ☐ IMPERIAL

1 W.O. 58366 - CROSS TUBE ✓
1 W.O. 58589 - CROSS TUBE ✓
1 W.O. 58590 - CROSS TUBE ✓
1 W.O. 58365 - CROSS TUBE ✓

10-05-15

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE Jason Mercel DTR # E-27410
TECHNICIAN (SIGNATURE): [Signature] SIGNATURE
NAME (PRINT): Mike Johnston 1st TECHNICIAN
CGSB LEVEL II SNT LEVEL 6606 CGSB REG. No. 6606
2nd TECHNICIAN
CGSB LEVEL II SNT LEVEL 6606 CGSB REG. No. 6606
REPORT REVIEWED BY: NAME INITIALS

WHITE - CLIENT COPY

CANARY - OFFICE COPY

PINK - TECHNICIAN COPY

GOLD - OFFICE COPY